

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Hidehiro Saho
Appln. No. : 10/705,344
Filed : November 10, 2003
Title : ELECTRONIC PART SUPPLYING TAPE AND ELECTRONIC
PART SUPPLYING TAPE CONNECTING METHOD

Conf. No. : 5170
Art Unit : 3728
Examiner : Bryon P. Gehman

Customer No. : 00116
Docket No. : 36261

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANT'S BRIEF

Sir:

This brief is filed in support of the Notice of Appeal filed December 8, 2006, which was accorded a filing date of the same. Therefore, the two-month period for filing this brief pursuant to 37 CFR § 41.37(a)(1) expires on February 8, 2007.

Pursuant to 37 CFR § 41.37(a)(2), this brief is accompanied by the requisite fee of \$500.00 under 37 CFR § 41.20(b)(2).

If there are any additional fees resulting from this communication, please charge the same to our Deposit Account No. 16-0820, our Order No. 36261.

37 CFR § 41.37(c)(1)(i) – REAL PARTY IN INTEREST

Matsushita Electric Industrial Co., Ltd., a company organized under the laws of Japan.

37 CFR § 41.37(c)(1)(ii) – RELATED APPEALS AND INTERFERENCES

None.

37 CFR § 41.37(c)(1)(iii) – STATUS OF CLAIMS

Claims 3, 7 and 10–13 stand rejected by the Office Action of June 9, 2006 and are forthwith appealed to the Board of Patent Appeals and Interferences.

A clean copy of the claims presented for appeal is attached as the Appendix.

37 CFR § 41.37(c)(1)(iv) – STATUS OF AMENDMENTS

Amendment “E” was filed on August 30, 2006 subsequent to the final rejection. Claims 12 and 13 were amended. Such amendments were accepted and entered to overcome a previous rejection under 35 U.S.C. 112 as well as for purposes of appeal.

37 CFR § 41.37(c)(1)(v) – SUMMARY OF CLAIMED SUBJECT MATTER

The subject application is directed to an electronic part supplying tape that is used in a tape feeder of an electronic part mounting process (e.g., page 4, ll. 1–4). The electronic part supplying tape holds electronic parts on a tape-like member at a constant pitch and continuously supplies the parts to a transfer head (e.g., page 4, ll. 4–5). The electronic part supplying tape as claimed herein and described in further detail below mitigates a need for an exclusive connecting jig as used in conventional methods which is used to connect end portions of two tape members (also referred to as “carrier tape” in the specification) (e.g., page 2, ll. 9–15; page 6, ll. 14–16).

Thus, connecting the tapes in this manner allows for continuous operation of extracting the electronic part supplying tape from a plurality of supply reels and of supplying the electronic parts, thereby permitting the mounting operation to be carried out without stopping the mounting apparatus at each time of interchanging reels (e.g., page 11, ll. 9–14).

More specifically, the subject electronic part supplying tape comprises a first tape member with a first end portion and a second end portion and a second tape member with a first end portion and a second end portion (e.g., page 11, ll. 4–8). A first connecting portion is formed on the second end portion of the first tape member (e.g., page 12, ll. 15–18); and a second connecting portion is formed on the first end portion of the second tape member, which is to be connected to the first connecting portion formed on the first tape member (e.g., page 12, ll. 18–22 – page 13, ll. 1–5). In addition, an alignment means for positioning the first connecting portion and the second connecting portion in a longitudinal direction, a width direction and a thickness direction of the tape members is also included (e.g., page 14, ll. 21–26 – page 15, ll. 1–7) as is a holding means for holding the first connecting portion and the second connecting portion to each other (e.g., page 15, ll. 7–9), wherein the first tape member and the second tape member are connectable by connecting the first connecting portion of the first tape member and the second connecting portion of the second tape member, wherein the first connecting portion of the first tape member comprises a locking member attachment coupled to the second end portion of the first tape member (e.g., page 16, ll. 7–20), and the second connecting portion of the second tape member comprises a locked member attachment coupled to the first end portion of the second tape member (e.g., page 16, ll. 20–23). The locking member attachment and the locked member attachment constitute the alignment means (page 20, ll. 21–26).

37 CFR § 41.37(c)(1)(vi) – GROUNDS OF REJECTION
TO BE REVIEWED ON APPEAL

Whether claims 3, 7, and 10–11 are unpatentable under 35 U.S.C. 103(a) over Ishii et al. (U.S. Patent 6,389,672) in view of Busler (U.S. Patent 3,431,548); and whether claims 12–13 are unpatentable under 35 U.S.C. 103(a) over EP 07165260 in view of Busler (U.S. Patent 3,431,548).

37 CFR § 41.37(c)(1)(vii) – ARGUMENT

The Law

The rejection under appeal in the present case is made under 35 U.S.C. 103(a). When combining or modifying references under 103(a), an Examiner must establish a *prima facie* case of obviousness or the rejection will be overturned. See *In re Rinehart*, 189 USPQ 143 (CCPA 1976); *In re Linter*, 173 USPQ 560 (CCPA 1972); *In re Saunders*, 170 USPQ 213 (CCPA 1971); *In re Tiffin*, 170 USPQ 88 (CCPA 1971), amended, 171 USPQ 294 (CCPA 1971); *In re Warner*, 154 USPQ 173 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968). The seminal case of *Graham v. John Deere Co.*, 383 U.S. 1, illuminates three steps or factual inquiries that an Examiner must engage in to establish such a *prima facie* case of obviousness. According to *Graham*, the examiner must: (1) set forth each of the differences between the claim and the reference(s) sought to be combined or modified; (2) set forth the proposed modification; and (3) explain why the proposed modification is obvious. Id. at 17. The case of *In re Jones* further explained that the third step in *Graham* amounts to a showing of some suggestion or motivation in the prior art that would lead one of ordinary skill in the art to pursue the proposed modification. 21 USPQ.2d 1941, 1943 (Fed. Cir. 1992).

In the case of *In re Fritch*, the Court established that the prior art must have suggested the desirability of the modification. 23 USPQ.2d 1780 (Fed. Cir. 1992). Further, the required suggestion or motivation in the prior art must be clear and particular. *In re Dembiscak*, 175 F.3d 994, 999 (CAFC 1999).

As consistently held by the Federal Circuit,

...‘virtually all [inventions] are combinations of old elements.’
Therefore an examiner may often find every element of a claimed invention in the prior art. *If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue.* Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. *Such an approach would be ‘an illogical and inappropriate process by which to determine patentability.’*

In re Rouffet, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998) (*citations omitted*).

Having set forth the appropriate standard for establishing obviousness, the specific rejections are discussed hereinafter.

Application of the Law

Applicant submits that the cited combination of Ishii et al. and Busler against claims 3, 7, 10, and 11 as well as the cited combination of EP 07165260 and Busler against claims 12 and 13 fail to satisfy the appropriate standard for establishing obviousness.

Claims 3, 7, 10 and 11

Ishii et al. is directed to a component assembling apparatus and process in which a plurality of component feeders supply a multiplicity of components to a component feeding position in succession for assembly into a product. The product can then be transferred to and held in a number of holding recesses provided in a product storing means. As a result, the components can be assembled into a product using the holding recesses and then stored therein to the next step of the process. (See Abstract; col. 1, ll. 38–48). Therefore, costs associated with the assembly process are reduced. More specifically, Ishii et al. is relied upon for its disclosure of holder units that are joined to each other by couplers 8a, 8b to connect, hold, and consequently align the holder units to form a tape-like member (e.g., col. 4, ll. 30–46; Figs. 5(a)–5(d)).

In Busler, carrier strips are joined to each other by aligning and connecting a snap member 43 and a receptacle 44 located at the ends of the carrier strip (col. 2, lines 25–32; Figs. 1–2). However, the Ishii et al. couplers 8a, 8b already connect, align, and hold the holder units 10 to form a tape-like member 1. Moreover, Ishii et al. is entirely silent on suggesting the desirability of modifying or substituting the couplers 8a, 8b. Even more, there is no advantage in substituting the couplers 8a, 8b for a different connecting structure that would also merely connect, align, and hold the holder units. Thus, there is no advantage in substituting the Ishii et al. couplers 8a, 8b with the Busler snap member 43 and receptacle 44 elements. As a result, modifying the Ishii et al. holder units by replacing them with the connecting structure of the Busler carrier strips would not have been an obvious substitution; and neither Ishii et al. nor Busler even remotely suggest the desirability of such a modification. Therefore, a *prima facie* case of obviousness has not been established, and the rejection should be reversed.

Claims 12 and 13

EP 07165260 discloses carrier tape pieces that are aligned, connected, and held to each other by a connecting structure, which is a cutout part K at one end and a complementary engagement at the other end (Abstract). Recall that in Busler, carrier strips are joined to each other by aligning and connecting a snap member 43 and a receptacle 44 located at the ends of each carrier strip. As can be seen, the EP 07165260 cutout part and complementary engagement already aligns, connects, and holds the carrier tape pieces. In fact, EP 07165260 does not even remotely suggest of the desirability or advantage in substituting its connecting structure for a different connecting structure that would also merely connect, align, and hold the carrier tape pieces. Thus, EP 07165260 does not suggest a motivation or desirability to modify the EP 07165260 connecting structure by making a substitution with the Busler snap member 43 and receptacle 44 elements.

Conclusion

In view of the foregoing, it is respectfully submitted that the Examiner has not established a *prima facie* case of obviousness in making each of the appealed rejections. Therefore, it is hereby requested that each of the Examiner's rejections be reversed.

Respectfully submitted,
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37 CFR § 41.37(c)(1)(viii) – CLAIMS APPENDIX

Claims 1-2 (Canceled)

Claim 3 (Previously presented): An electronic part supplying tape, used in a tape feeder arranged in a part supplying portion of an electronic part mounting apparatus, for holding electronic parts on a tape member at a constant pitch and for supplying the electronic parts, comprising:

a first tape member with a first end portion and a second end portion, and a second tape member with a first end portion and a second end portion;

a first connecting portion formed on the second end portion of the first tape member;

a second connecting portion formed on the first end portion of the second tape member, to be connected to the first connecting portion formed on the first tape member;

an alignment means for positioning the first connecting portion and the second connecting portion in a longitudinal direction, a width direction and a thickness direction of the tape members, and

a holding means for holding the first connecting portion and the second connecting portion to each other,

wherein the first tape member and the second tape member are connectable by connecting the first connecting portion of the first tape member and the second connecting portion of the second tape member,

wherein the first connecting portion of the first tape member comprises a locking member attachment coupled to the second end portion of the first tape member, and the second connecting portion of the second tape member comprises a

locked member attachment coupled to the first end portion of the second tape member, and

wherein the locking member attachment and the locked member attachment constitute the alignment means.

Claims 4-6 (Canceled)

Claim 7 (Previously presented): An electronic part supplying tape according to Claim 3, further comprising:

a recessed portion for containing an electronic part therein, formed at a constant pitch on the tape member,

wherein the electronic part supplying tape is supplied by being wound around a supply reel in a state of containing the electronic part in the recessed portion.

Claims 8-9 (Canceled)

Claim 10 (Previously presented): An electronic part supplying tape according to Claim 3, wherein said locking member attachment comprises:

a flat plate portion with coupling means for coupling the locking member attachment to the first tape member, and

at least one engaging member extending from said flat plate portion for attaching the locking member attachment to the locked member attachment;

wherein said locked member attachment comprises:

a stepped plate portion with coupling means for coupling the locked member attachment to the second tape member, and

at least one engaging hole in said stepped plate portion for engaging with the engaging member of the locking member attachment.

Claim 11 (Previously presented): An electronic part supplying tape according to Claim 3, wherein said locking member attachment comprises a flat plate portion with an engaging member, and

 said locked member comprises a stepped plate portion with an engaging hole, wherein said stepped plate portion comprises a stepped shape such that a stepped difference between the locking member attachment plate portion and the locked member plate portion in an up and down direction is not produced when the engaging fixture engages the engaging hole.

Claim 12 (Previously presented): An electronic part supplying tape according to Claim 3,

 wherein each of said tape members having a plurality of recessed portions formed at a constant pitch for containing electronic parts and a plurality of feed holes formed at a constant pitch for feeding the tape member feed hole by feed hole in the tape feeder arrangement, and

 wherein a feed hole is provided on the locked member attachment and locked member attachment at a position at which a positional relationship of the feed hole with a contiguous feed hole corresponds with a regular feed hole of the tape members at said constant pitch.

Claim 13 (Previously presented): A tape member attachment, used to connect two electronic part supplying tapes each having a plurality of recessed portions formed at a constant pitch for containing electronic parts and a plurality of feed holes formed at a constant pitch for feeding the tape feed hole by feed hole in a tape feeder arrangement in a part supplying portion of an electronic part mounting apparatus, comprising:

 a locking member to be connected to an end portion of a first tape, and a locked member to be connected to an end portion of a second tape,

 said locking member comprising:

 a plate portion, in correspondence to the width dimension of the first tape,
 an engaging member provided on a first end portion of the locking member plate portion,

 coupling means provided on a second end portion of the locking member plate portion for connecting the locking member to the end portion of the first tape, and

 a feed hole provided on the locking member plate portion adjacent to said engaging member and at a position at which a positional relationship of the locking member feed hole with a contiguous feed hole corresponds with a regular feed hole of the first tape at said constant pitch, and

 said locked member comprising:

 a plate portion, in correspondence to the width dimension of the second tape,
 an engaging recess provided on a first end portion of the locked member plate portion for engaging with the engaging member of the locking member,

coupling means provided on a second end portion of the locked member plate portion for connecting the locked member plate portion to the end portion of the second tape, and

a feed hole provided on the locked member plate portion adjacent to said engaging recess and at a position at which a positional relationship of the locked member feed hole with a contiguous feed hole corresponds with a regular feed hole of the second tape at said constant pitch,

wherein said locked member is connected to said locked member by engaging said engaging member into said engaging recess, and

wherein, when said locking member is connected to said first tape member and said locked member is connected to said second tape member, said first tape is connected to and aligned with said second tape in a longitudinal direction, a width direction and a thickness direction by engaging said engaging member into said engaging recess.

37 CFR § 41.37(c)(1)(ix) – EVIDENCE APPENDIX

None.

37 CFR § 41.37(c)(1)(x) – RELATED PROCEEDINGS APPENDIX

None.